



Published in final edited form as:

Matern Child Health J. 2015 July ; 19(7): 1543–1552. doi:10.1007/s10995-014-1659-9.

Adolescent Relationship Violence and Acculturation among NYC Latinos

Melissa DuPont-Reyes¹, Deborah Fry², Vaughn Rickert³, and Leslie L. Davidson^{1,4}

¹Department of Epidemiology, Mailman School of Public Health, Columbia University ²University of Edinburgh/NSPCC Child Protection Research Centre Edinburgh, Scotland ³Department of Pediatrics, Indiana University School of Medicine ⁴Department of Pediatrics, College of Physicians and Surgeons, Columbia University

Abstract

OBJECTIVES—Acculturation has been shown to positively and negatively affect Latino health. Little research investigates the overlap between acculturation and the different types of relationship violence among Latino youth and most research in this area predominantly involves Mexican-American samples. The current study examined associations between indices of acculturation (language use at home, chosen survey language, and nativity) and relationship physical violence and sexual coercion, both received and delivered, among predominantly Dominican and Puerto Rican adolescents from New York City.

METHODS—From 2006-2007, 1,454 adolescents aged 13-21 years in New York City completed an anonymous survey that included the Conflict in Adolescent Relationships Inventory which estimates experiences of physical violence and sexual coercion, both received and delivered, in the previous year. This analysis includes bivariate and multivariate methods to test the associations between language use at home, chosen survey language, and nativity with the different types of relationship violence.

RESULTS—Among females, there is a significant association between language use at home and overall level of acculturation with delivering and receiving relationship physical violence; however, we did not find this association in delivering and receiving relationship sexual coercion. We found no association between acculturation and any type of relationship violence among males.

CONCLUSIONS—Among Latina females, language spoken at home is an indicator of other protective factors of physical relationship violence. Future research in this area should explore the potential protective factors surrounding relationship violence among Latina females of various

Melissa DuPont-Reyes, MPH (Corresponding Author) Mailman School of Public Health Columbia University 722 West 168th Street, Room 720D New York, New York 10032 Phone: (212) 305-6706 Fax: (212) 342-5169 md3027@columbia.edu.
Deborah Fry, MA, MPH The University of Edinburgh/NSPCC Moray House School of Education St. Leonard's Land, Room 3.28 Holyrood Road, Edinburgh EH8 8AQ Phone: 0131 651 4033 Fax: 0044 131 651 6556 Debi.Fry@ed.ac.uk
Vaughn Rickert, PsyD Indiana University School of Medicine Department of Pediatrics 410 West 10th Street, Suite 1001 Indianapolis, IN 46202 Phone: (317) 274-8812 Fax: (317) 274-0133 vrickert@iu.edu
Leslie L. Davidson, MD, MSc (Epid), FAAP Mailman School of Public Health Columbia University 722 West 168th Street, Room 1601 New York, New York, 10032 Phone: (212) 304-5201 Fax: (212) 342-5169 lld1@columbia.edu

subgroups using comprehensive measures of acculturation, household composition and family engagement.

Keywords

Relationship violence; dating violence; acculturation; Latinos; youth; adolescents; language use

BACKGROUND

Relationship violence (RV), dating violence, or intimate partner violence includes physical, sexual, or emotional violence within the context of a current or prior romantic or dating relationship (1). RV in adolescents is highly prevalent regardless of gender where a range of physical violence and/or sexual coercion has been reported (2,3). According to the Center for Disease Control, 72% of 8th and 9th graders reported being in a relationship. Of those in a relationship, 25% indicated receiving one or more episodes of verbal, physical, emotional, or sexual aggression from a partner each year (4). Nationally about 10% of students reported being physically hurt by a boyfriend or girlfriend in the past 12 months and while RV affects both young women and men, it is more prevalent among Black and Latino high-school students compared to non-Latino White and Asian students (5,6). Investigators studying RV usually refer to those who report RV as either victims or perpetrators. However, given ample evidence that both male and female adolescents participate in relationship physical violence and sexual coercion, it is more appropriate to refer to RV victimization and perpetration as receiving and delivering RV, respectively, understanding that a given adolescent can both receive and deliver violence within an intimate relationship (7-9).

Both relationship physical violence and sexual coercion, whether received or delivered, have short-term and life-long sequelae as well as the more obvious physical sign, which may include social, behavioral, and psychological consequences (10-12). Adolescents are in a formative period from childhood leading into adulthood and behaviors experienced in adolescence are likely to affect future relationships as they transition into adulthood (1). When a young person is in an unhealthy relationship, s/he may develop frustration, anger, depressive symptoms, low self-esteem, and even physical harm. In fact, data suggests that adolescents who reported physical violence within their relationship in the past year were at higher risk of abusing alcohol, suicide attempts, and physical fighting with others (11,12). As would be expected, young women have identified RV as a priority public health issue (13).

Latino* adolescents exhibit specific attributes that could serve as either a risk or protective factor from RV. As immigration is common place among the Latino group in the US, 36% of the Latinos in the US are foreign born (14). Acculturation, defined as the adaptation or preservation of particular cultural norms, practices, and values that control and shape healthy and unhealthy behaviors, results from immigration and may shape behaviors in Latino adolescent relationships (15). Acculturation has been shown to positively and negatively affect relationship and intimate partner violence (IPV) among Latino adults. For

***Note:** The term Latino is used in this article to refer to individuals born in or with ancestry from Mexico, Central America, and Spanish-speaking countries in the Caribbean and South America.

example, IPV among Latinos increased the longer they lived in the US and higher rates have been reported for more acculturated Latinos compared to the less acculturated (16-20). In adolescents, the relationship between acculturation and relationship violence is unclear. Predictors like acculturation that shape RV are important to examine in order to minimize the impact of RV among Latino adolescents.

The impact of acculturation on RV may vary by country of origin. Country of origin may predict the level of acculturation of an individual and their family, the respective historical immigration pattern of the family unit, and the traditions and values inherent from that country or geographic region (e.g. Caribbean, Mexico, Central America, Andean South America, and Southern cone). Individuals of one Latino region may assimilate in the new culture, for example in the continental United States (US), at a different rate than individuals from other Latino regions. Variations in Spanish fluency among Latino groups in the US may provide evidence for different rates of assimilation by region. Spanish fluency among Latinos in the US has been shown to be patterned by Latino region (21). The level of shared language or Spanish fluency by Latino groups inherently attaches and shapes the values, traditions, and expectations held by families. In turn, it appears in adolescent dating relationships (22, 23). The shared language may guide decision-making to influence individual behavior. Spanish language use among families and parents may be the mechanism to having a close knit family and a strong family network. Spanish-speaking families may express more objections to potential dating partners of their teen, especially if the family has not met the young woman or man. This practice of “meeting” the potential partner first may result in a healthier relationship because partners are monitored by the family, and adolescents can turn to their family support system to address issues of conflict that may arise during the course of this relationship (23-26).

Previous studies analyzing RV in Latino adolescents measured acculturation using a range of factors including immigration status, language spoken at home, written language use, contact with Latin America and the Caribbean, maternal and paternal birthplace, ethnic identity, and time spent in the US (27-31). These studies have used a streamlined measure of acculturation using separate measures of nativity, survey language, and language use at home or to a partner, work or friends, or a combination of the three characteristics. Other studies have used comprehensive acculturation measures like the Short Acculturation Scale for Hispanics (32, 33). Although the definition of acculturation has recently shifted from that of a behavioral indicator to a broader one that includes use of English mixed media, values, and attitudes, most measures still employ behavioral indicators like language use (27-31) because they rapidly screen a population and are readily available. All instruments used to measure acculturation include a language and Latino identity component, which validate the use of indices of acculturation using preexisting data that contains these components.

Prior research has shown that high levels of acculturation may influence high-risk behavior in adolescents leading to poor health outcomes. For example, Newcomb et al. studied 227 sexually active Latinas identifying as being of Mexican origin and found that highly acculturated Latinas adopt more sexually risky behavior and higher HIV-related risks within their relationships than those who were less acculturated (27). High levels of acculturation in Latino adolescents is associated with an increased number of lifetime sexual partners and

pregnancies; however, higher levels of acculturation is also associated with more positive beliefs about using condoms during sexual intercourse (34, 35). As a comparative example of a different health behavior, Landrine et al. analyzed 1,798 Mexican-American ninth-graders from California and found that less acculturated youth from close-knit Latino families react less to peer-pressure in initiating smoking, and have less desire to mature quickly and engage in riskier behavior (36). Acculturated Latino youth show the same patterns as whites and blacks: truancy, peer-pressure, and risk-taking behavior is more predictive of initiating smoking. Thus, prevention programs which focus on peer-pressure as the central risk factor for smoking would likely be less effective for non-acculturated Latino youth. A qualitative study of Latino youth demonstrated that cultural identity and gender norms influenced decisions on whether to smoke, with whom to smoke, and where to smoke (37).

While research in the area of acculturation and adolescent RV is limited, there is extensive research in the impact of acculturation on intimate partner violence among Latino adults, but these data have been equivocal. Using a representative sample of the US, Kantor et al. reported that when taken as a single ethnic group, Latinos were similar to Whites in their likelihood of reported female battering after controlling for cultural norms regarding violence approval, age and socioeconomic status. In the same study, a stratified analysis by specific countries of origin showed that Mexican and Puerto Rican women born in the continental US were associated with increased risk of battery (20). The researchers concluded that Latinos should not be held as a homogenous group because this minimizes and undermines the heterogeneity among regional subgroups with regard to acculturation level, country of birth, impoverishment, and their cultural violence norms. Other studies among Latino adults found an association between intimate partner violence and acculturation that varies by gender and acculturation stress. Acculturation stress is a particular type of stress that arises when the acculturation process causes problems for an individual as they face conflicts between their native culture and their host culture (38, 39). Caetano et al. analyzed Latino couples from the US and found that among males, lower acculturation was positively associated with acculturation stress which increased the likelihood of experiences of received and delivered intimate partner violence (38). Among females, all acculturation levels and increased acculturation stress were associated with increased received and delivered intimate partner violence. Thus, acculturation, directly and in presence of acculturation stress, increased intimate partner violence.

The limited research in adolescent RV among Latinos predominantly involves Mexican-American samples. Similar to adults, the effect of acculturation on RV is unclear as findings have shown that acculturation confers both risk and protective effects on RV. For example, among females only, having parents born outside of the US and speaking Spanish at home was protective against RV, and reporting ethnic discrimination was a risk factor for RV (19, 29). In contrast, Silverman et al. found that Latino immigrant girls aged 16 or older reported a reduced risk of RV compared to their non-immigrant peers and Asian, Black, and White immigrants in stratified analyses and language spoken at home was not a factor of reported RV (30).

To assess whether acculturation is a risk or protective factor of RV among Latino adolescents in New York City, this current study examined associations between indices of acculturation (language use at home, chosen survey language, and nativity) and relationship physical violence and sexual coercion, both received and delivered, among predominantly Dominican and Puerto Rican adolescents. We hypothesized that those with high overall level of acculturation would have increased odds of experiencing RV. To our knowledge, no study has explored acculturation and RV among Dominican and Puerto Rican youth.

METHODS

Participants

From four public high schools in New York City, 1,454 adolescents aged 13-21 years from 2006-2007 completed an audio computer assisted survey (ACASI) or a paper and pencil anonymous survey in English or Spanish representing a response rate of 70% of the schools population (40). The following youth were excluded from the current analyses: youth who did not self-report his or her biological sex (n=20 missing); youth who did not have a relationship partner in the last year (n=314) or did not respond to the item (n=15 missing); youth who had a same sex relationship (n=26) or who did not indicate the sex of their partner (n=169 missing). Same sex relationships were excluded due to small reported numbers. Thus, violence best reflects male to female and female to male relationship violence. Similarly, youth with incomplete data regarding nativity, language used at home and survey language were excluded (n=233). There was no statistical difference between the included and excluded participants. The excluded participants had a similar racial/ethnic distribution and the same median age as the included participants. The final sample for these analyses included 677 Latino participants.

Instruments

The survey drew questions from many sources including the CDC Behavioral Risk Factor Surveillance Survey, the NYC Youth Risk Behavior Survey (YRBS), and the World Health Organization Multicountry Study (41-43). The following measures were assessed: age, biological sex, race, ethnicity, nativity, language predominantly spoken at home, language chosen to complete the survey, nature and importance of the romantic relationship, lifetime and last 12 months occurrences of physical/verbal/sexual abuse within the romantic relationship, and experiences of non-partner sexual violence. The original survey questions are provided in the Appendix. Estimates of relationship physical violence and sexual coercion, either received or delivered, in the previous year by a sexual or romantic partner were obtained using the validated Conflict in Adolescent Relationships Inventory (CADRI) subscales. The CADRI (Kappa=0.85) provides measures of the frequency of relationship physical violence ($\alpha=0.83$) and sexual coercion ($\alpha=0.51$), but does not measure severity of experiences of relationship physical violence and sexual coercion (44, 45).

Similar to previous studies reported (27-32, 46), three available indices of acculturation were used: nativity of the participant, language spoken at home, and language chosen to complete the survey. Responses to the nativity question (Were you born in the U.S.?) were coded as '1=Yes' or '0=No'. Responses to the language spoken at home (Is English the

language you speak at home most of the time?) were coded as '1=Yes' and '0=No, Spanish'. The language chosen to complete the survey was coded as '1=English' and '0=Spanish'. The three questions were scored to create an overall level of acculturation categorized as 'not at all to somewhat acculturated' (score=0 on at least one acculturation measure) and 'highly acculturated' (score=1 for all three acculturation measures).

The survey asked five paired questions to measure experiences of physical violence and three paired questions to measure experiences of sexual coercion in the relationship in the past year, all taken from the CADRI. Responses to the experiences of relationship physical violence and sexual coercion were dichotomously categorized as 'seldom or never' or 'sometimes or often.'

Covariates tested in this analysis included the importance of the relationship, non partner sexual abuse history, and fear within the context of the relationship. Based on prior research from Partners and Peers, we hypothesized that these variables would be important covariates to include in our analyses as they are each related to the CADRI relationship violence measures.³⁷ Five questions assessed *non partner* sexual abuse (i.e., parent, family, older and same -age acquaintance, and stranger) and responses were coded as 'no' or 'yes'. Two questions measured the respondent's fear of the partner and the partner's fear of the respondent. Responses to the fear question were coded as 'not at all' or 'a little to very afraid.'

Procedure

Owing to multi-organizational involvement, the protocol and consent for this study were reviewed and approved by three Institutional Review Boards from the New York City Department of Education, Columbia University and St. Luke's Hospital. Passive parental consent was obtained after mailing letters to the parents in English and/or Spanish that contained study information and the opportunity to opt their child out of the study. Active assent of the student was also requested at the time of survey implementation. Students were offered a \$10 gift card to a bookstore for participating (40). Two of four schools completed an ACASI version of the survey and, owing to a lack of computer availability, two schools completed paper and pencil versions. Forty-six parents opted their child out and fifty-two youth opted themselves out of the study.

Data Analysis

We calculated the prevalence of exposures to RV, and examined associations between acculturation measures and RV. Uncorrelated χ^2 statistics were used for bivariate comparisons between the categorical variables of indices of acculturation and overall level of acculturation and RV in addition to test for sex differences in the data. P-values <0.05 were considered statistically significant. Logistic regression was used to obtain odds ratios (ORs) and 95% confidence intervals (CIs) for the crude and adjusted association between indices of acculturation and relationship violence. To further understand the association between indices of acculturation and relationship violence, potential confounders (the importance of the relationship, non partner sexual abuse history, and level of fear within the context of the relationship) were considered for inclusion in adjusted models. If the

covariate was non-significant when included in the model and did not change the effect estimates, then the covariate was removed from the final adjusted model. All data analyses were performed using SAS version 9.2.

RESULTS

The Latino sample (N=677) that reported dating a partner of the opposite sex in the past year and completed measures of RV and acculturation included more female participants (57%) than male (43%) (Table 1). The median age of the sample was 16 years. Of the total sample, 77% were born in the US, slightly more than 60% reported speaking English at home, and 94% chose to complete the survey in English. The majority of the Latino sample are of Dominican heritage (51%), followed by Puerto Rican (29%), Mexican (3%), Cuban (1%), and other Latino (16%).

While we found no sex differences in acculturation measures, we found significant differences in the prevalence of RV and the way each sex views their relationship (Table 1). More females reported their relationship as ‘important to very important’ (80%) compared to males (59%). Female respondents were more likely to experience non partner sex abuse in their lifetime (16%) compared to males (3%). In terms of the level of fear in the relationship, we found that 22% of females and 12% of males responded that they are ‘a little to very afraid’ of their partner and 20% of females and 24% of males responded that their partner is ‘a little to very afraid’ of them. Among females, delivering physical violence was the most common type of RV (45%), followed by receiving physical violence (30%), receiving sexual coercion (14%), and delivering sexual coercion (9%). We found a slightly different pattern among males where the most common type of RV was receiving physical violence (28%), followed by receiving sexual coercion (17%), then lastly delivering physical violence (15%) and sexual coercion (15%).

In the bivariate analysis comparing variables with the measures of RV and acculturation, we found that participant age and the importance of the relationship were not significant predictors of RV and were not significantly related to the acculturation measures. Therefore, these variables were excluded in the multivariate analysis. Non partner sex abuse was associated with both receiving and delivering relationship physical violence among both sexes (Table 2). Non partner sex abuse is statistically associated with both receiving and delivering relationship sexual coercion among males only, and due to a slight significance among females, it was included as a covariate in the multivariate analysis. Fear within the context of the relationship was associated with all specific types of RV with the exception of *receiving* sexual coercion among males.

Our analyses found that Latinas primarily speaking English at home were at higher risk of experiencing *delivering* and *receiving* physical violence when compared to Latinas speaking Spanish at home. There was no significant association between the acculturation measures and sexual coercion, and also between being born in the US or the choice of language to complete the survey and RV. Among males, we found no association between the acculturation measures and any type of RV.

The overall level of acculturation showed a trend in RV among females where ‘highly acculturated’ females had greater likelihood of reporting RV when compared to ‘not at all to somewhat acculturated’ females. This trend reached statistical significance where ‘highly acculturated’ females are more likely to report *receiving* and *delivering* physical violence when compared to the ‘not at all to somewhat acculturated’ females (Table 2). The trend in sexual coercion was not statistically significant. There was no association between overall level of acculturation and RV among male adolescents.

Table 3 summarizes the crude and adjusted odds ratios from the multivariate analysis among females only. As in the bivariate results, there was no association between acculturation and RV among males from the multivariate analysis. In the multivariate analysis among females, the first model controlled for the level of fear in the relationship and the second model controlled for fear in addition to *non partner* sexual abuse history. After controlling for fear within the context of the relationship and *non partner* sexual abuse history, females who speak English at home were twice as likely to report *receiving* physical violence when compared to females who speak Spanish at home. Females who were identified as ‘highly acculturated’ were found to have an increased likelihood *receiving* physical violence (AOR=1.89, 95% CI: 1.15, 3.10) when compared to ‘not at all to somewhat acculturated’ females. We found the same pattern in *delivering* physical violence for females who speak English at home and for ‘highly acculturated’ females. There is no statistically significant association between the acculturation measures and sexual coercion.

DISCUSSION

Our findings show that acculturated females report a greater likelihood of *receiving* and *delivering* physical violence when compared to females who are ‘not at all to somewhat’ acculturated after adjusting for *non partner* sexual abuse history and level of fear in the relationship. Language spoken at home was a significant predictor of physical violence regardless of nativity in the US and the choice of survey language after adjusting for sexual abuse and level of fear. Though we found *non partner* sexual abuse to be an independent risk factor, it did not change the effect size of the odds ratios. Because of the lower proportions of sexual coercion experiences and those who completed the survey in Spanish, we did not have sufficient power to adequately test these associations. Future studies with a larger sample size will have power to detect and test these associations.

Our findings are consistent with other studies that found Spanish language use at home to be protective against violence in Mexican-American Latinas, regardless of nativity and that there are no associations between acculturation measures and RV among males (19, 28-31). Language spoken at home is a marker of other protective factors of RV among Latino females across various Latino subgroups. Families and parents of the females who mostly speak Spanish at home may hold on to their traditional values such as the importance of closeness and support in the home from parents and extended family members. In turn this builds a strong family network that is supported by Latina females speaking their parent's native language (23-26). The strong family network, which includes social and emotional support, may be protective against unhealthy behaviors, and the risks of RV for adolescent girls. We explored family engagement, curfew, and household composition measures and

found no significant associations, but the measures were not comprehensive. Future studies can study these domains in addition to other potential factors to improve the understanding of Spanish language as a protective factor of RV among Latino female adolescents.

Important limitations to this study deserve comment. First, we used a convenience sample of predominantly Dominican and Puerto Rican adolescents from NYC and as a result, our conclusions may not apply to the Latino youth in the greater metropolitan region as well as to other racial/ethnic groups. Though our findings are consistent with other studies assessing Mexican-American youth (19, 29), demonstrating a protective effect among low acculturated females from RV, future research in this area may analyze other Latino subgroups with comprehensive acculturation measures to contribute to the existing evidence. Improved acculturation measures that were lacking in our study may include time spent or lived in the US by participants as youth who may have been born in the continental US may have spent significant time in the Dominican Republic or in Puerto Rico with extended family. Also, measures on parental nativity and time spent or lived in the US would strengthen the measure of acculturation in youth, as it would establish second or third generation status of Latinos in the US allowing for examination of increasing risk of RV as more time is spent in the US. Other cultural measures to include in acculturation assessment would be family cohesion, religiosity, culture and cultural expectations of youth, language used with friends and entertainment such as music and television. Another concern is the possibility for literacy bias. Participants were required to complete a survey based on high-literacy ability potentially excluding the lowest acculturated youth from participating. Finally, this study was of cross-sectional nature, which does not allow for the assessment of other potential confounders that were lacking in the data, and therefore causality in the associations we found. Examples of key confounders include exposure to domestic violence during childhood, culture values, and mental health problems, among others. Despite these limitations, the study provides insight into Latino RV and acculturation among urban youth and salient association that differs by sex.

Researchers and youth providers can benefit from knowing that Spanish language spoken at home is protective of RV among Latino adolescents in NYC. School-based interventions may be especially desirable for addressing adolescent RV and interventions tailored and culturally sensitive to Latino adolescents would be most effective. For example, a school-based dating violence intervention assessed differences in effectiveness among acculturated Latino students noting significant interactions between the intervention and English proficiency (47). Among the acculturated students, the investigators identified stigma of dating, let alone violence, in their home/family and clergy contexts, which the intervention was not able to improve. Among those with limited English, the intervention improved help-seeking attitudes and behaviors regarding RV indicating that the intervention improved confidence in discussing problems with people of authority such as teachers, law enforcement, or clergy.

Our study findings can help identify ways to improve community or school-based interventions aimed at addressing Latino adolescent RV. Acculturated youth may be experiencing heightened stigma at home when it comes to dating which is supported by our finding where those who predominantly speak English at home consequently experience

more RV. Those who predominantly speak Spanish at home may be able to speak more freely to their parents regarding dating and RV, which is protective of RV experiences. However, when in a violent relationship, low acculturated adolescents may be unable to reach assistance from key intervening authorities such as school counselors and family court services. For these reasons, interventions that strengthen the overall family unit in terms of emotional and social support could lead to lower levels of RV among Latino adolescents. For acculturated adolescents, a focus towards creating an open discussion where they feel free to discuss their relationship at home would be an improved and specified intervention. Additionally for non-acculturated adolescents, a focus towards improving adolescents' and parents' knowledge and abilities in help-seeking during an experience of RV would be a key way of specified intervention.

Acknowledgements

This article was written with funds from National Institute of Mental Health grant 5-T32-MH-13043. This project was supported in part by the Centers for Disease Control and Prevention (CDC) funded Center for Youth Violence Prevention Cooperative agreement # U49 CE00731. This project was supported in part by the New York City Council. This research was supported in part by Grant R49 CE002096-01 and cooperative agreement U49CE000731 from the National Center for Injury Prevention and Control, CDC. The opinions expressed are the responsibility of the authors and not necessarily those of the CDC.

APPENDIX

INDICES OF ACCULTURATION (3 items)

1. Were you born in the United States?
2. Is English the language you speak at home most of the time?
- 2a. If no, what language do you speak at home most of the time?
3. Language student chose to complete the survey?

MEASURES OF RELATIONSHIP PHYSICAL VIOLENCE (5 items: A items indicate delivered; B items indicate received)

During a conflict or argument with my partner in the past year:

1. A. I threw something at him or her.
B. She or he threw something at me.
2. A. I threatened to hurt him or her.
B. She or her threatened to hurt me.
3. A. I kicked, hit, or punched him or her.
B. She or he kicked, hit, or punched me.
4. A. I pushed, shoved, or shook him or her.

B. She or he pushed, shoved, or shook me.

5. A. I slapped him or her or pulled his or her hair.

B. She or he slapped me or pulled my hair.

MEASURES OF RELATIONSHIP SEXUAL COERCION (3 items: A items indicate delivered; B items indicate received)

During a conflict or argument with my partner in the past year:

1. A.

I touched him or her sexually when he or she didn't want me to.

B. She or he touched me sexually when I did not want him or her to.

2. A. I forced him or her to have sex when she or he didn't want to.

B. She or he forced me to have sex when I didn't want to.

3. A. I threatened him or her in attempt to have sex with him or her.

B. She or he threatened me in an attempt to have sex with me.

MEASURES OF FEAR WITHIN THE CONTEXT OF THE RELATIONSHIP (2 items)

Some people are afraid that their partner will hurt them if they argue or do something their partner doesn't like.

A. How much would you say you are afraid of him/her?

B. How much would you say your partner is afraid of you? MEASURES OF NON PARTNER SEXUAL ABUSE HISTORY

(5 items) Many people experience sexual violence outside of dating relationships, both by people they know and by strangers. This section asks what types of violence you may have experienced in your life. When we ask about "sexual abuse," we mean any sexual fondling, touching, oral sex, intercourse (penetration of the vagina or anus with a penis, fingers, or object). How often in your life has:

A. Your parent sexually abused you or forced you to have sex?

B. A family member other than a parent sexually abused you or forced you to have sex?

C. An older acquaintance (such as a family friend, teacher, minister, neighbor etc.) sexually abused you or forced you to have sex?

D. Someone else your age who you knew but was not your partner sexually abused you or forced you to have sex?

E. A stranger sexually abused you or forced you to have sex?

REFERENCES

- Centers for Disease Control and Prevention (CDC). Teen Dating Violence. 2012. http://www.cdc.gov/ViolencePrevention/intimatepartnerviolence/teen_dating_violence.html
- Jezl DR, Molidor CE, Wright TL. Physical, sexual and psychological abuse in high school relationships: prevalence rates and self-esteem issues. *Child and Adolescent Social Work Journal*. 1996; 13:69–87.
- Foshee V, Linder F, MacDougall J, Bangdiwala S. Gender Differences in the Longitudinal Predictors of Adolescent Violence. *Preventive Medicine*. 2001; 32:128–141. [PubMed: 11162338]
- Centers for Disease Control and Prevention (CDC). Understanding Teen Violence. 2010. http://www.cdc.gov/violenceprevention/pdf/TeenViolence_2010-a.pdf.
- Centers for Disease Control and Prevention (CDC). Physical Violence among High School Students- United States 2003. *MMWR Morbidity and Mortality Weekly Report*. 2006; 55(19):532–535. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5519a3.htm>. [PubMed: 16708057]
- O'Keefe M. Predictors of Violence among High School Students. *Journal of Interpersonal Violence*. 1997; 12(4):546–568.
- Morse BJ. Beyond the CTS: assessing gender differences in partner violence. *Violence and Victims*. 1995; 10:251–272. [PubMed: 8703839]
- Magdol L, Moffitt TE, Caspi A, Newman DL, Fagan L, Silva PA. Gender differences in partner violence in a birth cohort of 21-year-olds: bridging the gap between clinical and epidemiological approaches. *Journal of Consulting and Clinical Psychology*. 1997; 65:68–78. [PubMed: 9103736]
- Gray H, Foshee V. Adolescent Violence: Difference between One-Sided and Mutually Violent Profiles. *Journal of Interpersonal Violence*. 1997; 12:126–141.
- Coker AL, McKeown RE, Sanderson M, David KE, Valois RF, Huebner ES. Severe violence and quality of life among South Carolina high school student. *American Journal of Preventative Medicine*. 2000; 19(4):220–227.
- Silverman JG, Raj A, Mucci LA, Hathaway JE. Violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *The Journal of the American Medical Association*. 2001; 286(5):572–579.
- Olshen E, McVeigh T, Wunsch-Hitzig RA, Rickert VI. Dating violence, sexual assault, and suicide attempts among urban teenagers. *Archives of Pediatric and Adolescent Medicine*. 2007; 161:539–545.
- Zeitler MS, Paine AD, Breitbart V, Rickert VI, Olson C, Stevens L, Rottenberg L, Davidson LL. Attitudes about Intimate Partner Violence Screening Among Ethnically Diverse Sample of Young Women. *Journal of Adolescent Health*. 2006; 39(1):119.e1–119.e8. [PubMed: 16781970]
- Hugo Lopez M, Gonzalez-Barrera A, Cuddington D. Diverse Origins: The Nation's 14 Largest Hispanic-Origin Groups. *Pew Research Hispanic Trends Project*. Jun 19.2013
- Abraido-Lanza AF, Armbrister AN, Florez KR, Aguirre AN. Toward a Theory-Driven Model of Acculturation in Public Health Research. *American Journal of Public Health*. 2006; 96(8):1342–1346. [PubMed: 16809597]
- Caetano R, Schafer J, Clark CL, Cunradi CB. Intimate partner violence, acculturation and alcohol consumption among Latino couples in the U.S. as cited in: Caetano R, Ramisetty-Mikler S, McGrath C. 2004. Acculturation, drinking, and intimate partner violence among Latino couples in the United States: A longitudinal study. *Hispanic Journal of Behavioral Sciences*. 1998; 26:60–78.
- Lown EA, Vega W. Prevalence and predictors of physical partner abuse among Mexican American women. *American Journal of Public Health*. 2001b; 91:441–445. [PubMed: 11236411]
- Sorenson SB, Telles CA. Self-reports of spousal violence in a Mexican-American and non-Latino White population. *Violence and Victims*. 1991; 6:3–15. [PubMed: 1859804]
- Sanderson M, Coker AL, Roberts RE, Tortolero SR, Reininger BM. Acculturation, ethnic identity, and violence among Latino ninth-grade students. *Preventive Medicine*. 2004; 39(2):373–383. [PubMed: 15226049]

20. Kantor GK, Jasinski JL, Aldarondo E. Sociocultural status and incidence of marital violence in Latino families. *Violence and Victims*. 1994; 9(3):207–222. [PubMed: 7647043]
21. United States Department of Health and Human Services. Office of Minority Health, Data/Statistics, Hispanic/Latino Profile. U.S. Census Bureau. 2010. <http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlID=54>
22. Christopherson TM, Jordan-Marsh M. Culture and Risk Taking in Adolescents' Behaviors. *The American Journal of Maternal/Child Nursing*. 2004; 29(2):100–105.
23. Smokowski PR, David-Ferdon C, Stroupe N. Acculturation and violence in minority adolescents: a review of the empirical literature. *The Journal of Primary Prevention*. 2009; 30(3-4):215–263. [PubMed: 19387835]
24. Ulloa EC, Jaycox LH, Marshall GN, Collins RL. Acculturation, gender stereotypes and attitudes about violence among Latino Youth. *Violence and Victims*. 2004; 19(3):273–287. [PubMed: 15631281]
25. Williams LR, Hickie KE. "He cheated on me, I cheated on him back": Mexican American and White adolescents' perceptions of cheating in romantic relationships. *Journal of Adolescence*. 2011; 34(5):1005–1016. [PubMed: 21168908]
26. Fredland NM. Nurturing healthy relationships through a community-based interactive theater program. *Journal of Community Health Nursing*. 2010; 27(2):107–118. [PubMed: 20437291]
27. Newcomb MD, Romero GJ, Wayment HA, Wyatt GE, Tucker MB, Carmona JV, Solis B, Mitchell-Kernan C. Acculturation, Sexual Risk Taking, and HIV Health Promotion among Latinas. *Journal of Counseling Psychology*. 1998; 45(4):454–467.
28. Garcia L, Hurwitz EL, Kraus JF. Acculturation and reported intimate partner violence among Latinas in Los Angeles. *Journal of Interpersonal Violence*. 2005; 20:569–590. [PubMed: 15788555]
29. Ramos MM, Green D, Booker J, Nelson A. Immigration Status, Acculturation, and Violence Risk for Latino Adolescent Girls in New Mexico. *Maternal and Child Health Journal*. 2011; 15(7): 1076–80. [PubMed: 20700636]
30. Silverman JG, Decker MR, Raj A. Immigration-Based Disparities in Adolescents to Violence. *Maternal and Child Health Journal*. 2007; 11:37–43. [PubMed: 16845589]
31. Thomson MD, Hoffman-Goetz L. Defining and measuring acculturation: a systematic review of public health studies with Latino populations in the United States. *Social Science & Medicine*. 2009; 69:983–991. [PubMed: 19525050]
32. Marin G, Sabogal F, Main BV, Otero-Sabogal R, Perez-Stable EJ. Development of a Short Acculturation Scale for Hispanics. *Hispanic Journal of Behavioral Sciences*. 1987; 9(2):183–205.
33. Barona A, Miller JA. Short Acculturation Scale for Hispanic Youth (SASH-Y): A preliminary report. *Hispanic Journal of Behavioral Sciences*. 1994; 16(2):155–162.
34. Kaplan CP, Erickson PI, Juarez-Reyes M. Acculturation, gender role orientation and reproductive risk-taking behavior among Latino adolescent family planning clients. *Journal of Adolescent Research*. 2002; 17:107–121.
35. Norris AE, Ford K. Condom beliefs in urban, low income, African American and Hispanic youth. *Health Education Quarterly*. 1994; 21:39–53. [PubMed: 8188492]
36. Landrine H, Richardson JL, Klonoff EA, Flay B. Cultural diversity in the predictors of adolescent cigarette smoking: the relative influence of peers. *Journal of Behavioral Medicine*. 1994; 17(3): 331–346. [PubMed: 7932684]
37. McClear-Sills JD, Villanti A, Rosario E, Bone L, Stillman F. Influences on tobacco use among urban Latino youth adults in Baltimore: findings from a qualitative study. *Progress in Community Health Partnerships*. 2010; 4(4):289–297. [PubMed: 21169706]
38. Caetano R, Ramisetty-Mikler S, Caetano Vaeth PA, Harris TR. Acculturation stress, drinking, and intimate partner violence among Latino couples in the U.S. *Journal of Interpersonal Violence*. 2007; 22(11):1431–1447. [PubMed: 17925291]
39. Berry TW, Kim U, Minde T, Mok D. Comparative Studies of Acculturative Stress. *International Migration Review*. 1987; 21(3):491–511.

40. Fry, DA.; Davidson, LL.; Rickert, VI.; Lessel, H. Partners and Peers: Sexual and Violence among NYC Youth. New York City Alliance against Sexual Assault and the Columbia Center for Youth Violence Prevention, Columbia University; 2008.
41. Centers for Disease Control and Prevention (CDC). Youth Risk Behavior Surveillance: United States, 2005. Surveillance Summaries. Morbidity and Mortality Weekly Report. 2006; 55(S-5):1–108. [PubMed: 16410759]
42. Garcia-Moreno, C.; Jansen, HA.; Ellsberg, M.; Heise, L.; Watts, C. WHO Multicountry Study on Women's Health and Domestic Violence against Women: Initial Results on Prevalence, Health Outcomes, and Women's Responses. World Health Organization; Geneva: 2005.
43. New York City Departments of Health and Mental Hygiene (DOHMH) and Education (DOE): New York City Youth Risk Behavior Survey, 2007; data requested from DOHMH Bureau of Epidemiology Services. Jun. 2008
44. Wolfe DA, Scott K, Reitzel-Jaffe D, Wekerte C, Grasley C, Pittman AL. Development and Validation of the Conflict in Adolescent Relationships Inventory. Psychological Assessment. 2001; 13:277–292. [PubMed: 11433803]
45. Edelen MO, McCaffrey DF, Marshall GN, Jaycox LH. Measurement of teen violence attitudes: an item response theory evaluation of differential item functioning according to gender. The Journal of Interpersonal Violence. 2009; 24(8):1243–1263.
46. Wallace PM, Pomery EA, Latimer AE, Martinez JL, Salovey P. A Review of Acculturation Measures and Their Utility in Studies Promoting Latino Health. Hispanic Journal of Health and Behavior. 2010; 32(1):37–54.
47. Jaycox LH, McCaffrey D, Eiseman B, Aronoff J, Shelley GA, Collins RL, Marshall GN. Impact of a School-Based Dating Violence Prevention Program among Latino Teens: Randomized Controlled Effectiveness Trial. Journal of Adolescent Health. 2006; 39:694–704. [PubMed: 17046506]

Sample Characteristics of Latino Participants by Biological Sex Partners and Peers, New York City, 2006-2007

**
P < 0.01 chi-square test comparing sexes.

Table 2

Predictors of Relationship Physical Violence and Sexual Coercion from the Partner in the Last Year Among Latino Participants Partners and Peers, New York City, 2006-2007

	Females		Males	
	Received Physical Violence OR (95% CI)	Received Sexual Coercion OR (95% CI)	Received Physical Violence OR (95% CI)	Received Sexual Coercion OR (95% CI)
Nativity in the United States	1.22 (0.70, 2.13)	0.73 (0.37, 1.46)	1.09 (0.59, 2.03)	1.15 (0.53, 2.47)
Most often speak English at home	2.25 (1.37, 3.71)**	1.72 (0.88, 3.39)	1.09 (0.63, 1.86)	0.98 (0.51, 1.88)
Chose to complete the survey in English	2.66 (0.77, 9.21)	1.01 (0.28, 3.56)	2.81 (0.63, 12.66)	3.16 (0.41, 24.58)
High level of acculturation	1.83 (1.15, 2.90)**	1.23 (0.66, 2.29)	1.16 (0.68, 1.97)	0.96 (0.50, 1.83)
Importance of the relationship	0.99 (0.57, 1.72)	1.39 (0.68, 2.84)	1.24 (0.72, 2.14)	1.17 (0.61, 2.25)
How much are you afraid of him/her?	3.59 (2.14, 6.02)**	6.51 (3.38, 12.51)**	2.40 (1.12, 5.17)*	1.64 (0.65, 4.10)
How much is your partner afraid of you?	1.92 (1.13, 2.28)*	3.17 (1.64, 6.11)**	3.00 (1.65, 5.44)**	1.31 (0.94, 3.88)
Presence of non partner sex abuse	2.56 (1.47, 4.46)**	1.88 (0.93, 3.80)	4.17 (1.14, 15.24)*	3.55 (0.96, 13.15)*

	Females		Males	
	Delivered Physical Violence OR (95% CI)	Delivered Sexual Coercion OR (95% CI)	Delivered Physical Violence OR (95% CI)	Delivered Sexual Coercion OR (95% CI)
Nativity in the United States	1.08 (0.65, 1.78)	0.74 (0.33, 1.65)	0.64 (0.31, 1.33)	0.86 (0.41, 1.83)
Most often speak English at home	2.26 (1.46, 3.51)**	1.70 (0.77, 3.75)	0.99 (0.50, 1.96)	0.92 (0.47, 1.79)
Language chosen to complete the survey	1.65 (0.65, 4.18)	0.61 (0.17, 2.16)	2.67 (0.34, 20.81)	2.69 (0.35, 20.94)
High level of acculturation	1.88 (1.24, 2.86)**	1.46 (0.70, 3.04)	0.94 (0.48, 1.84)	0.88 (0.45, 1.70)
Importance of the relationship	1.20 (0.72, 2.00)	1.03 (0.43, 2.45)	1.06 (0.54, 2.08)	1.04 (0.53, 2.04)
How much are you afraid of him/her?	2.40 (1.44, 3.97)**	4.87 (2.31, 10.27)**	2.70 (1.14, 6.38)*	2.60 (1.10, 6.13)*
How much is your partner afraid of you?	2.54 (1.50, 4.31)**	2.33 (1.07, 5.09)*	3.43 (1.69, 6.96)**	2.87 (1.42, 5.82)**
Ever experienced non partner sex abuse	2.53 (1.44, 4.43)**	1.61 (0.69, 3.73)	4.22 (1.14, 15.70)*	4.18 (1.13, 15.52)*

Notes:

The referent groups for each variable are as follows: students who were born outside of the United States, most often did not speak English at home, chose to complete the Spanish survey, were not at all to somewhat acculturated, described the relationship as not important, reported no fear within the relationship, and never experienced non partner sex abuse. Odds Ratios (OR) and the 95% confidence intervals (95%CI) for predictors of relationship violence are given.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

P < 0.05
**
*

P < 0.01 for chi-square test comparing predictors of relationship violence.

Table 3

Multivariate Models Measuring the Independent Contribution of Acculturation Variables to Relationship Violence Among Females Partners and Peers, New York City, 2006-2007

	Received Physical Violence			Received Sexual Coercion			Delivered Physical Violence			Delivered Sexual Coercion		
	B	OR (95% CI)		B	OR (95% CI)		B	OR (95% CI)		B	OR (95% CI)	
Unadjusted												
Nativity in the United States	0.10	1.22 (0.70, 2.13)		-0.16	0.73 (0.37, 1.46)		0.04	1.08 (0.65, 1.78)		-0.15	0.74 (0.33, 1.65)	
Most often speak English at home	0.41	2.25 (1.37, 3.71)	**	0.27	1.72 (0.88, 3.39)		0.41	2.26 (1.46, 3.51)	**	0.26	1.70 (0.77, 3.75)	
Chose to complete the survey in English	0.49	2.66 (0.77, 9.21)		0.00	1.01 (0.28, 3.56)		0.25	1.65 (0.65, 4.18)		-0.25	0.61 (0.17, 2.16)	
High level of acculturation	0.30	1.82 (1.15, 2.90)	**	0.11	1.23 (0.66, 2.29)		0.32	1.88 (1.24, 2.86)	**	0.19	1.46 (0.70, 3.04)	
Model 1												
Nativity in the United States	0.12	1.26 (0.70, 2.26)		-0.21	0.65 (0.31, 1.38)		0.08	1.12 (0.70, 1.98)		-0.18	0.70 (0.30, 1.63)	
Most often speak English at home	0.42	2.30 (1.36, 3.87)	**	0.23	1.60 (0.77, 3.29)		0.43	2.35 (1.49, 3.71)	**	0.22	1.54 (0.67, 3.51)	
Chose to complete the survey in English	0.48	2.65 (0.73, 9.59)		-0.09	0.84 (0.22, 3.23)		0.34	1.96 (0.72, 5.32)		-0.38	0.47 (0.12, 1.80)	
High level of acculturation	0.33	1.95 (1.94, 3.12)	**	0.07	1.15 (0.59, 2.26)		0.34	1.97 (1.27, 3.04)	**	0.17	1.40 (0.64, 3.06)	
Model 2												
Nativity in the United States	0.07	1.15 (0.64, 2.08)		-0.27	0.59 (0.27, 1.25)		0.04	1.08 (0.64, 1.83)		-0.21	0.65 (0.28, 1.53)	
Most often speak English at home	0.40	2.21 (1.31, 3.75)	**	0.21	1.53 (0.74, 3.12)		0.41	2.29 (1.44, 3.63)	**	0.20	1.49 (0.65, 3.40)	
Chose to complete the survey in English	0.45	2.46 (0.67, 9.12)		-0.11	0.81 (0.21, 3.14)		0.30	1.81 (0.66, 4.95)		-0.39	0.46 (0.12, 1.77)	
High level of acculturation	0.32	1.89 (1.15, 3.10)	*	0.05	1.10 (0.56, 2.16)		0.33	1.93 (1.24, 2.99)	**	0.16	0.77 (0.31, 1.89)	

Notes:

Model 1 adjusted for the level of fear in the relationship between both partners. Model 2 adjusted for the level of fear in the relationship between both partners and presence of non partner sexual abuse. Beta coefficients (B), Odds Ratios (OR) and the 95% confidence intervals (95% CI) for acculturation variables as predictors of relationship violence are given.

* P < 0.05

** P < 0.01 for significance of acculturation variables as predictors of relationship violence.